Material Safety Data Sheet
Cortron® RU-142

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Cortron® RU-142

Product use Oxygen Scavenger

Manufacturer Champion Technologies, Inc.
P.O. Box 450499
Houston, TX, 77245
USA

Telephone 1-281-431-2561 (Champion)

In case of emergency 1-800-424-9300 (CHEMTREC)
1-703-527-3887 (CHEMTREC - International)

2. HAZARDS IDENTIFICATION

Physical state liquid

Color Clear. Pink

Emergency overview DANGER!
Irritant. Contains material which may cause cancer. See toxicological information (section 11) Not considered to be flammable.

Potential health effects

Inhalation Irritating to respiratory system.

Ingestion Irritating to mouth, throat and stomach.

Skin Irritating to skin.

Eyes Irritating to eyes.

Chronic effects No known significant effects or critical hazards.

See toxicological information (section 11)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS no.	Weight %
Oxygen Scavenger	Proprietary	60 - 100
Cobalt chloride	Proprietary	0.1 - 1

4. FIRST AID MEASURES

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.

Skin contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Ingestion Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention. Never give anything by mouth to an

unconscious person.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. FIRE-FIGHTING MEASURES

Flash point Not applicable.

Flammability of the product In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable Use an extinguishing agent suitable for the surrounding fire.

Special exposure hazards Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products No specific data.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards Not available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions Avoid contact of spilled material with soil and prevent runoff entering surface waterways. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. HANDLING AND STORAGE

Handling Use only with adequate ventilation. Put on appropriate personal protective equipment (see

section 8). Wear appropriate respirator when ventilation is inadequate. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Empty containers retain product residue and can be hazardous. Do not reuse container. Workers should wash hands and face before eating, drinking and smoking.

Storage Store in accordance with local regulations. Keep container in a well-ventilated area. Store in the original container or an approved alternative made from a compatible material. Keep tightly closed when not in use. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection

Hands Use chemical-resistant, impervious gloves.

Eyes Safety eyewear should be used when there is a likelihood of exposure.

Body Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Occupational exposure limits

Component	Source	Type	PPM	MG/M3	Notes
Cobalt chloride	ACGIH TLV	TWA		0.02 mg/m3	

Engineering measures Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. Emergency baths, showers, or other equipment appropriate for the potential level of exposure should be located close to the workstation location.

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid

Color Clear. Pink

Odor Not available.

Odor threshold Not available.

Boiling/condensation point Not available.

Pour point -32.8 °F (-36.0 °C)

Flash point Not applicable.

Flammable limits Lower: Not available.
Upper: Not available.

Auto-ignition temperature	Not available.
pH	3.8 - 5.8, Method (neat)
Evaporation rate	Not available.
Solubility	Water
Vapor density	Not available.
Relative density	1.3300 - 1.3600 @ 60 °F (15.6 °C)
Vapor pressure	Not available.
Viscosity	Dynamic: 2 - 6 cPs @ 75 °F (23.9 °C)
Octanol/water partition coefficient (LogPow)	Not available.

Note: Typical values only - not to be interpreted as sales specifications

10. STABILITY AND REACTIVITY

Stability	The product is stable.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Avoid exposure - obtain special instructions before use.
Materials to avoid	No specific data.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Substance	Test type	Species	Dose	Classification
Oxygen Scavenger				
	LD50 Oral	Rat	3,000 mg/kg	Not applicable
Cobalt chloride				
	LD50 Oral	Guinea pig	55 mg/kg	Not applicable
	LD50 Oral	Rat	80 mg/kg	Not applicable
	LD50 Oral	Mouse	80 mg/kg	Not applicable

Irritation/Corrosion

Substance	Test type	Species	Exposure	Classification
Product	skin	Rabbit	4 hrs	Non-irritating to the skin.

Substance	Test Type	Result
Product	Corrositex	Non-corrosive

Carcinogenicity

Component	IARC	NTP	OSHA
Cobalt chloride	2B		

2B - IARC Group 2B, possibly carcinogenic to humans

12. ECOLOGICAL INFORMATION

Environmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity

Conclusion/Summary Not available.

Other adverse effects No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Waste disposal The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. TRANSPORT INFORMATION

Refer to the bill of lading or container label for DOT or other transportation hazard classification. Additionally, be aware that shipping descriptions may vary based on mode of transport, shipment volume or weight, container size or type, and/or origin and destination. Consult your company's Hazardous Materials / Dangerous Goods expert or your legal counsel for information specific to your situation.

15. REGULATORY INFORMATION

HCS Classification

Component	Classification
Oxygen Scavenger	Toxic., Irritant.
Cobalt chloride	Carcinogen, Harmful., Sensitizer, Occupational exposure limits

U.S. Federal regulations

CERCLA: Hazardous substances - Reportable quantity:

Substance	Reportable quantity
Oxygen Scavenger	5000 lbs
Cobalt chloride	N/A

Product Reportable quantity	Substance
8,064 lb, 720 gal US	Oxygen Scavenger

Product spills equal to or exceeding the threshold above trigger the reporting requirements under CERCLA for the listed hazardous substance. Report the spill or release to the National Response Center (NRC) at (800) 424-8802.

SARA Title III Section 302 Extremely hazardous substances (40 CFR Part 355):
None of the components are listed.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Immediate (acute) health hazard. Delayed (chronic) health hazard.

SARA 313 - Supplier notification

Component	CAS no.	Weight %
Oxygen Scavenger	Proprietary	60 - 100
Cobalt chloride	Proprietary	0.1 - 1

Clean Water Act (CWA) 307:
None of the components are listed.

Clean Water Act (CWA) 311:
The following components are listed: Oxygen Scavenger. Sodium Hydroxide.

Clean Air Act (CAA) 112 accidental release prevention:

None of the components are listed.

Clean Air Act (CAA) 112 regulated flammable substances:
None of the components are listed.

Clean Air Act (CAA) 112 regulated toxic substances:
None of the components are listed.

State regulations

Massachusetts Substances: The following components are listed: Oxygen Scavenger.

New Jersey Hazardous Substances: The following components are listed: Cobalt chloride. Oxygen Scavenger.

Pennsylvania RTK Hazardous Substances: The following components are listed: Cobalt chloride. Oxygen Scavenger.

California Prop. 65

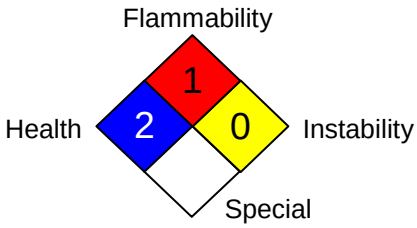
Not available.

International regulations

United States inventory (TSCA 8b):	All components are listed or exempted.
Canada inventory (DSL):	All components are listed or exempted.

16. OTHER INFORMATION

National Fire Protection Association (U.S.A.):



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